

# Separating Shapes

## Goals

- Decompose shapes.
- Find areas of rectangles and right triangles.
- Identify dimensions of rectangles from their proportional relationships.
- Understand how to separate a rectangle into two congruent right triangles.

## Notes

Suggest that students first find the area of the given shape and then use that area to determine the areas of the smaller shapes. Point out that the smaller shapes cannot overlap. Solutions to all problems in this set appear on page 87.

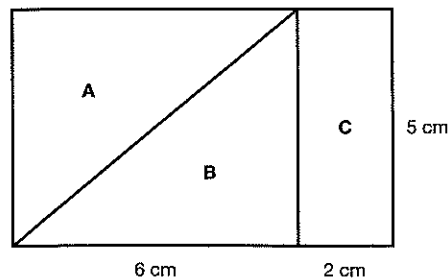
## Questions to Ask

### Separating Shapes 1

- What is the area of the rectangle? (40 sq cm)
- How many shapes are you to make? (3) How many lines are you to draw? (2)
- Which shape will you make first? (Rectangle C) What will be the shape of the remaining region? (rectangle)
- How can you make two congruent triangles from the remaining rectangle? (Draw a diagonal.)
- What is the relationship among the smaller shapes? (The sum of the areas of the two triangles is three times the area of the rectangle.)

## Solutions

1. Possible answer:



2. 10

3. 15